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PEPPER CULTIVAR TRIALS - 1979

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FREMONT PEPPER VARIETY TRIALS, 1979

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Twelve pepper cultivars were evaluated at Fremont in 1979. All were bell peppers.

Procedure

Seeds were planted in Jiffy-7s on April 5. Transplants were set in the field on June 6. Previously 780 lbs. of 15-15-15 fertilizer had been broadcast in the field. Transplants were sidedressed with 150 lbs. of 6-24-24 as a starter fertilizer, and sidedressed in late June with 25 lbs. of nitrogen. Plants were sidedressed with Furadan on June 20 and July 17; additional insect control measures included Sevin, Guthion, and Thiodan. Copper, M-45, and Bravo were used for disease prevention.

Individual plants were spaced 18 inches apart in rows spaced 3 feet apart. Plots were single rows 30 feet long and were replicated four times.

Fruits were harvested on August 9 and 24, and September 19. Fruits were divided into U.S. No. 1 and culls, counted, and weighed. Ten fruits were selected at random from the first replicate of each variety at the first and second harvest, and fruit characteristics were evaluated. Wall thickness was measured with a micrometer. The break force of the wall of 3 whole fruits was measured with a Magness-Taylor pressure tester.

Seed was donated by the following sources: Joseph Harris, Co., Inc -- Keystone Resistant Giant, Hybelle, Lady Bell, Midway, Pennbell; Staddon's Select, Yolo Wonder B; Stokes Seed, Inc. -- Ace, Bell Boy, Canape, Early Niagara Giant; W. Atlee Burpee Co. -- New Ace.

Results

There were not very large differences in yield at the first harvest. However, Hybelle, Pennbell, and Lady Bell had the highest yields at first harvest.

The data presented in Table 1 are totals for three harvests. Hybelle, Pennbell, Bell Boy, and Lady Bell were the best four varieties in the trial. Hybelle and Pennbell have weaker walls than Keystone Resistant Giant (KRG), but Bell Boy and Lady Bell were of equivalent wall thickness and break force with KRG. Bell Boy has very blocky fruit equivalent to KRG but averaged 3-4 lobes. Pennbell averaged fewer lobes/fruit and had a more pointed tip than KRG. Ace Hybrid, New Ace Hybrid, and Midway had weak fruit wall. The standard varieties in this test Staddon's Select, Yolo Wonder B, and Keystone Resistant Giant were three of the four lowest yielding varieties. Pennbell and Staddon's Select had the highest incidence of blossom end rot.

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TABLE 1. U.S. No. 1 yield and fruit characteristics of varieties. Fremont Pepper Variety trial - 1979.

Entry	Yield			Fruit				Fruit Characteristics					
	Tons/ A	No. (1000)	%US #1	#/ plant	Wt. (lb)	Lgth. (in)	Diam. (in)	Lgth. Dia.	Tip ¹ shape	lobes ²	Wall thickness (mm)	Break ³ force (lb)	% BER
Hybelle	16.7	138	85	16.8	.24	3.3	2.7	1.25	1.3	3.0	5.0	11	0.6
Pennbell	15.4	129	87	15.4	.24	3.4	2.6	1.30	2.0	2.8	5.0	12	4.3
Bell Boy	14.8	117	87	13.9	.25	2.8	2.6	1.04	1.3	3.3	5.9	15	0.1
Lady Bell	14.6	105	92	11.8	.28	3.3	2.7	1.23	1.4	3.1	4.8	15	0.9
Canape	12.9	133	90	15.7	.19	3.3	2.4	1.36	3.0	2.5	4.5	10	0.4
Ace Hybrid	12.4	113	85	14.4	.22	3.9	2.9	1.33	2.3	3.0	4.4	9	0.5
New Ace Hybrid	12.3	111	88	13.9	.22	3.5	2.7	1.29	2.3	3.2	4.1	10	2.2
Midway	11.9	92	87	11.4	.26	3.6	2.9	1.26	1.3	3.5	4.4	10	1.3
Staddon's Select	11.8	93	84	12.0	.25	3.1	2.8	1.13	1.0	3.3	4.5	12	5.0
Yolo Wonder B	11.3	87	84	10.8	.26	3.3	3.0	1.22	1.8	3.2	5.3	15	1.9
Early Niagara Giant	10.9	82	87	10.0	.26	3.2	2.9	1.12	1.0	3.4	5.5	14	1.4
Keystone Res't Giant	9.9	70	89	8.7	.28	3.1	3.1	1.01	1.3	3.9	5.5	14	1.4

1) Tip shape - 1 = blocky; 3 = pointed.

2) Average of 5 fruits.

3) Average break force of three fruits.

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